AMENDMENTS TO THE SPECIFICATION

Please amend the following Paragraphs as follows:

[0017] Figure 2 illustrates an image sequence; [[and]]

[0018] Figure 3 is a graphic representation of the pairs (v, σ)[[.]]; and

[0020] Figure 1 shows a preliminary image acquisition step 101. Referring now to Figure 4, [[T]]the acquisition is performed by a scanner type radiography apparatus 400 used to acquire images of an object 401, such as internal organs of a living organism, particularly the human body. The technologies of these apparatuses are based on the emission of radiation received on or at a sensor/detector after it has gone through the object 401. The radiation received by the sensor/detector therefore depends on the object 401 crossed. The sensor/detector produces a digital image that can be viewed on a screen 402, printed, and/or processed by a computer 403, or any apparatus comprising processing circuits. The method is recorded in a memory 404 in the form of instruction codes and implemented by a microprocessor, in order to improve the interpretation of an image and/or reduce the dose of radiation used to carry out an examination. This memory 404 and this microprocessor are preferably contained in the radiography apparatus 400. In practice, this memory 404 and this microprocessor are connected to the radiography apparatus 400, either by an internal connector or by a connector external to the radiography apparatus 400.

[0023] Fluoroscopic noise is the resultant of the quantum noise and the response of the image acquisition system, namely of the detector. The method described deals with the totality formed by the quantum noise and the apparatus 400. Technically speaking, the method is not specific to quantum noise or to an apparatus, but it can be applied to any other noise that is not spatially correlated.

[0025] Consider that the radiography apparatus 400 has acquired two images i-1 and i of a same region of an object 401. The images have an N-pixel horizontal resolution and an M-pixel vertical resolution, as shown in Figure 2. A pixel with coordinates (x, y) of an image i has a gray level equal to Pi(x, y).

[0026] Step 101 proceeds to step 102 for sub-sampling images coming from the radiography apparatus 400. Each pixel of an image has an associated value corresponding to a gray level. This value has a certain dynamic range. In other words, each pixel has an associated value ranging from Vmin to Vmax. Conventionally Vmin is equal to 0 and Vmax to 2^14. In practice, Vmin and Vmax depend on the sensor used and its calibration. When an image is sub-sampled, the interval [Vmin, Vmax] is divided into intervals separated in such a way that the joining of the sub-intervals covers [Vmin, Vmax]. Each sub-interval [Bi, Bs] included in [Vmin, Vmax] has a corresponding sub-group of pixels such that Bi <= Pi(x,y) < Bs.

[0044] When the end-of-iteration condition is fulfilled, the method proceeds from step 109 to the end step 111. In step 111, the apparatus 400 having performed the processing possesses coefficients α, β and γ of the function: $\sigma(v) = \alpha.\sqrt{v} + \beta.v + \gamma$ modeling the fluoroscopic noise during an examination implementing a fluoroscopic noise. Having carried out the processing, the apparatus 400 uses these coefficients either to determine a filter enabling the production of an image in which fluoroscopic noise has been substantially reduced or to parametrize the fluoroscopy apparatus 400.

[0045] In the case of a filtering operation, the image after filtering is therefore free of fluoroscopic noise. This favors the reading and interpretation of this image by a practitioner. Therefore the practitioner then can place greater reliance on the images given by the radiography apparatuses 400.

[0046] As for the parametrizing of the fluoroscopy apparatus 400, it is useful because, once the coefficients are determined, the quantity of noise present in an image and, hence, the signal-to-noise ratio, are known. If this signal-to-noise ratio is satisfactory, i.e., if there is a lot of signal and little noise, the dose of radiation emitted by the fluoroscopy device 400 is reduced. The examination then becomes less traumatic for the patient. On the other hand, if the signal-to-noise ratio is poor, the radiation dose is increased so that the examination is relevant. In both cases, a gain in obtained because the optimum dose of radiation needed to obtain the most relevant result possible has been successfully determined.

[0050] The method and embodiments thereof is implemented either in a digital image processing station 403 or in a device 403 for the control of a radiography apparatus 400. With the machines commonly used in radiography, the method and embodiments thereof give results within about thirty milliseconds for the processing of an image having a definition of one million pixels. These performance levels are highly satisfactory in a real-time context. An operator does not feel that he/she is waiting for the image.

Please add new paragraph [0019] following paragraph [0018] and renumber subsequent paragraphs accordingly.

[0019] Figure 4 illustrates a scanner type radiography system.